

LAKE: ELL (L) P (VLMP 31 )  
 TOWN: WELLS  
 COUNTY: YORK

MIDAS: 119  
 TRUE BASIN: 1  
 SAMPLE STATION: 1

WHOLE LAKE INFORMATION

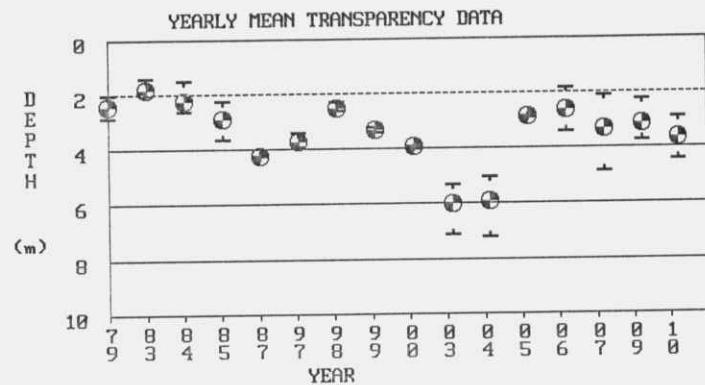
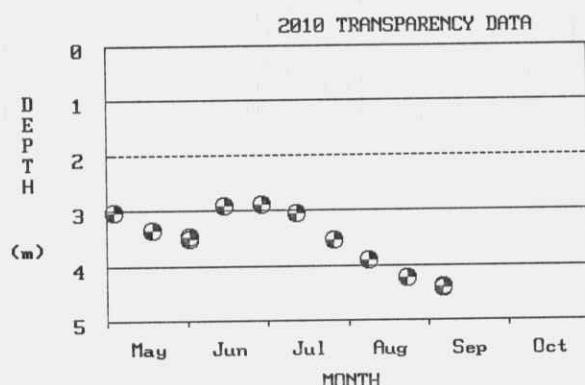
MAX. DEPTH: 16 m. (51 ft.)  
 MEAN DEPTH: 5 m. (15 ft.)  
 DELORME ATLAS #: 02  
 USGS QUAD: NORTH BERWICK  
 IFW REGION A: Sebago Lake (Gray)  
 IFW FISH. MANAGMENT: Coldwater

TRUE BASIN CHARACTERISTICS

SURFACE AREA: 13.0 ha. (32.1 a.)  
 FLUSHING RATE: 1.39 flushes/yr.  
 VOLUME: 711664.5 cu. m. (577 ac.-ft.)  
 DIRECT DRAINAGE AREA: 1.81 sq. km. (0.70 sq. mi.)

PLEASE NOTE THE FOLLOWING: The SAMPLE STATION # refers to the location sampled. The term TRUE BASIN is used to define areas within a lake that are separated by shallow reefs or shoals and therefore function as separate lakes. There are approximately 50 lakes in the state that have more than 1 True Basin. True Basin Characteristics are now being included in the first section of these reports to enable users of the Phosphorous Loading Methodology to better evaluate the data. If there is no data for a particular True Basin, True Basin Characteristics must be obtained from the DEP. ELL (L) P has 1 True Basin(s).

**SECCHI DISK TRANSPARENCY GRAPHS:**



Note: 2010 graphs may indicate multiple readings taken on a given day.

**SUMMARY OF CHEMICAL AND TROPHIC STATE PARAMETERS:**

[\* indicates that Secchi disk was visible at bottom of lake (or one reading used in calculation was visible)].

YEAR	MEAN COLOR (SPU)	MEAN pH	MEAN ALK (mg/l)	MEAN COND. (uS/cm)	TOTAL PHOS. MEANS (ppb)	SECCHI DISK (m.)					CHLOROPHYLL A(ppb)			TROPHIC STATE INDICES			
						EPI	COND.	MEAN SURF	MEAN BOT.	MEAN PRO.	MIN.	MEAN	MAX.	N	MIN.	MEAN	MAX.
						CORE	GRAB	GRAB	GRAB	GRAB							
1979	33	6.00	5.0	30	16	12	90	51	2.0	2.4	2.8	2	7.0	7.8	8.6	-	-
1983	-	-	-	-	-	-	-	-	1.4	1.8	2.0	2	-	-	-	-	-
1984	37	6.50	3.0	-	14	-	-	-	1.5	2.2	2.6	6	7.0	7.0	7.0	-	-
1985	-	-	-	-	-	-	-	-	2.2	2.9	3.6	5	-	-	-	-	-
1987	25	6.80	4.0	40	10	-	80	-	4.2	4.2	4.2	1	-	-	-	-	-
1997	30	6.59	5.0	49	8	-	11	-	3.4	3.7	3.9	1	6.5	6.5	6.5	-	-
1998	24	-	5.0	49	-	17	13	14	2.3	2.5	2.6	1	9.3	9.3	9.3	-	-
1999	21	-	2.0	58	13	-	47	23	3.2	3.3	3.4	1	26.0	26.0	26.0	-	-
2000	17	-	6.1	59	18	-	36	-	3.9	3.9	4.0	1	17.0	21.0	25.0	-	-
2003	-	-	-	-	-	-	-	-	5.3	6.0	7.1	5	-	-	-	-	-
2004	-	-	-	-	-	-	-	-	5.0	5.9	7.2	5	-	-	-	-	-
2005	62	6.69	4.4	76	20	-	76	-	2.8	2.8	2.9	1	10.0	10.0	10.0	-	-
2006	-	-	-	-	-	-	-	-	1.8	2.6	3.4	5	-	-	-	-	-
2007	-	-	-	-	-	-	-	-	2.1	3.3	4.8	5	-	-	-	-	-
2009	-	-	-	-	20	-	81	-	2.2	3.1	3.7	5	11.0	11.0	11.0	-	-

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YEAR	MEAN	MEAN	MEAN	MEAN	COND.				TOTAL PHOS.	MEANS (ppb)	SECCHI DISK (m.)			CHLOROPHYLL A(ppb)			TROPHIC STATE INDICES				
	COLOR	pH	ALK	(SPU)	(mg/l)	(uS	EPI	SURF	BOT.	PRO.	MIN.	MEAN	MAX.	N	MIN.	MEAN	MAX.	EPI	PHOS		
					/cm)	CORE	GRAB	GRAB	GRAB								C	G	SEC	CHL	
2010	-	-	-	-	-	-	-	-	-	2.9	3.6	4.4	5	-	-	-	-	-	-	-	
SUMMARY:	31	6.41	4.3	52	15	15	54	29	1.4	3.4	7.2	16	6.5	12.3	26.0	-	-	-	-	-	

**LATE SUMMER TEMPERATURE / DISSOLVED OXYGEN PROFILES:**

DEPTH	SAMPLE DATE																	
	09/14/84	09/08/87	08/22/97	08/17/98	08/27/99	08/24/00	08/17/05	08/18/09	°C	ppm								
0.0	-	-	20.5	9.1	21.3	8.0	24.9	7.9	23.4	9.0	22.3	9.1	24.9	8.3	29.1	7.8		
1.0	19.9	8.4	20.0	9.2	21.3	8.0	24.9	7.9	23.3	8.9	21.5	9.3	24.0	8.8	26.1	9.1		
2.0	19.9	8.2	20.0	9.1	21.3	8.0	22.2	2.4	22.7	9.1	21.3	9.4	22.7	2.6	21.7	3.7		
3.0	18.1	5.0	19.0	9.2	21.3	7.9	18.2	0.1	21.7	6.5	21.3	9.3	16.7	0.9	15.2	0.6		
4.0	15.0	0.1	17.5	7.4	19.1	1.8	14.9	0.0	20.6	3.6	19.4	4.5	12.9	0.4	11.5	0.7		
5.0	12.2	0.1	13.0	3.4	13.9	0.3	11.9	0.0	13.3	0.2	14.8	1.1	10.8	0.4	9.1	1.6		
6.0	10.5	1.9	10.0	3.8	10.4	2.2	9.3	3.6	10.1	1.8	10.9	2.5	9.3	0.9	7.8	3.8		
7.0	8.7	2.6	7.0	4.0	8.5	3.8	7.8	4.8	8.7	1.8	9.1	1.7	7.9	0.5	7.1	4.5		
8.0	8.1	2.2	6.5	3.8	7.1	4.0	6.9	4.7	7.7	1.5	7.8	1.4	6.6	0.6	6.6	4.3		
9.0	7.2	1.7	6.0	3.8	6.8	4.2	6.1	4.6	7.0	1.1	6.9	0.8	6.0	0.7	6.3	4.1		
10.0	7.0	1.1	6.0	2.2	6.1	3.9	5.9	4.6	6.4	0.4	6.3	0.3	5.7	0.6	6.0	2.7		
11.0	6.5	0.1	5.5	1.8	6.0	3.5	5.7	4.2	6.2	0.4	5.8	0.3	5.5	0.7	5.8	0.6		
12.0	-	-	5.0	1.5	5.9	2.3	5.5	3.6	6.0	0.2	5.5	0.2	5.3	0.7	5.5	0.5		
13.0	-	-	5.0	1.4	5.8	0.8	5.1	1.7	5.8	0.3	5.4	0.2	5.3	0.7	5.4	0.4		
14.0	-	-	5.0	1.3	5.8	0.1	-	-	5.8	0.2	5.3	0.2	5.3	0.7	5.3	0.4		
15.0	-	-	5.0	1.2	-	-	-	-	5.7	0.2	5.3	0.2	5.3	0.6	5.3	0.4		
16.0	-	-	5.0	1.0	-	-	-	-	5.7	0.1	-	-	5.3	0.6	5.3	0.4		

## WATER QUALITY SUMMARY

### **ELL POND, WELLS**

MIDAS: 0119, Sample Station # 1

The Maine Department of Environmental Protection (ME-DEP) and the Volunteer Lake Monitoring Program (VLMP) have collaborated in the collection of lake data to evaluate water quality, track algal blooms, and determine water quality trends. This dataset does not include bacteria, mercury, or nutrients other than phosphorus.

Water quality monitoring data for Ell Pond have been collected since 1979. During this period, 8 years of basic chemical information was collected in addition to Secchi Disk Transparency (SDT). In summary, the water quality of Ell Pond is considered slightly below average based on measures of SDT, total phosphorus (TP), and Chlorophyll-a (Chla). The potential for nuisance algal blooms on Ell Pond is moderate to high.

**Water Quality Measures:** Ell Pond is a slightly colored lake (average color 31 SPU) with an average SDT of 3.4 m (11.3 ft). The range of water column TP for Ell Pond is 8 - 20 parts per billion (ppb) with an average of 15 ppb. Chla ranges from 6.5 - 26 ppb with an average of 12.3 ppb. Recent dissolved oxygen (DO) profiles show high DO depletion in deep areas of the lake. The potential for phosphorus to leave the bottom sediments and become available to algae in the water column (internal loading) is high. Oxygen levels below 5 parts per million stress certain cold water fish and a persistent loss of oxygen may eliminate or reduce habitat for sensitive cold water species.

See ME-DEP Explanation of Lake Water Quality Monitoring Report for measured variable explanations. Additional lake information can be found on the Internet at <http://www.lakesofmaine.org/> and/or <http://www.maine.gov/dep/blwq/lake.htm>, or telephone the ME-DEP at 207-287-3901 or the VLMP at 207-783-7733.

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